

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (presently amended): A system for demonstrating signal cascades that occur in certain cells when certain stimuli are introduced, comprising:

(a) a dynamic database comprising:

(i) definitions relating to known cellular components, reactions and concepts;

(ii) **concepts adapted to inherit from other concepts and capable of joining**

other concepts;

(iii) **events;**

(iv) **attributes;** and

(b) an inference engine for generating signal cascades,

wherein the inference engine is linked to the dynamic database.

Claim 2 (canceled)

Claim 3 (canceled)

Claim 4 (presently amended): The system of claim **1** ~~2~~, wherein said concepts contain other concepts.

Claim 5 (presently amended): The system of claim **1** ~~2~~, wherein said concepts exclude other concepts.

Claim 6 (canceled)

Claim 7 (presently amended): The system of claim **1** ~~2~~, wherein said concepts are associated

with said attributes.

Claim 8 (presently amended): The system of claim 1 ~~2~~, wherein said attributes comprise indicia of size, shape, color, location of a graphic, time, or species.

Claim 9 (presently amended): The system of claim 1 ~~2~~, wherein said dynamic database comprises signal transduction information.

Claim 10 (presently amended): The system of claim 1 ~~2~~, wherein said dynamic database comprises pathology information.

Claim 11 (presently amended): The system of claim 1 ~~2~~, wherein said dynamic database comprises information specific to chemical areas.

Claim 12 (original): The system of claim 11, wherein said information comprises signal transduction information on plant cellular environments or animal cellular environments.

Claim 13 (previously presented): The system of claim 1, wherein the dynamic database comprises data for binding constants, rate equations, reactant concentrations, primary sequences of functional sites in biomolecules or proteins, or efficacy of physical interactions with binding partners.

Claims 14-56 (canceled)